

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: UNNAMED POND	Lake Area (ha):	24.52
Town: NEW DURHAM	Maximum depth (m):	4.6
County: Strafford	Mean depth (m):	1.3
River Basin: Merrimack	Volume (m <sup>3</sup> ):	326000
Latitude: 43°27' N	Relative depth:	0.8
Longitude: 71°10' W	Shore configuration:	1.99
Elevation (ft): 530	Areal water load (m/yr):	80.51
Shore length (m): 3500	Flushing rate (yr <sup>-1</sup> ):	60.50
Watershed area (ha): 4318.7	P retention coeff.:	0.27
% watershed ponded: 10.8	Lake type:	artificial

BIOLOGICAL:

	26 January 1987	3 July 1986
DOM. PHYTOPLANKTON (% TOTAL) #1	ASTERIONELLA 78%	CERATIUM 80%
#2		
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		1045.0
CHLOROPHYLL-A (µg/L)		7.24
DOM. ZOOPLANKTON (% TOTAL) #1	SPARSE - NO DOMINANT	NAUPLIUS LARVAE 36%
#2		KERATELLA 31%
#3		CYCLOPOID COPEPODS 12%
ROTIFERS/LITER	2	185
MICROCRUSTACEA/LITER	6	185
ZOOPLANKTON ABUNDANCE (#/L)	11	382
VASCULAR PLANT ABUNDANCE		Abundant
SECCHI DISK TRANSPARENCY (m)		3.4
BOTTOM DISSOLVED OXYGEN (mg/L)	9.2	0.2
BACTERIA (fecal col., #/100 ml) #1		< 10
#2		
#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None  
Hypolimnion volume (m<sup>3</sup>): None

CHEMICAL:

Lake: UNNAMED POND

Town: NEW DURHAM

	26 January 1987		3 July 1986		
DEPTH (m)	1.0	3.0	2.0		4.0
pH (units)	6.4	6.4	6.6		6.4
A.N.C. (Alkalinity)	7.3	7.4	6.5		6.3
NITRATE & NITRITE NITROGEN	0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.55	0.63	0.50		0.60
TOTAL PHOSPHORUS	0.032	0.030	0.033		0.040
CONDUCTIVITY ( $\mu$ mhos/cm)	34.3	34.6	30.3		31.4
APPARENT COLOR (cpu)	17	12	25		30
MAGNESIUM			0.32		
CALCIUM			2.5		
SODIUM			2.1		
POTASSIUM			0.30		
CHLORIDE	2	3	3		3
SULFATE	4	3			
TN : TP	19	21	15		15
CALCITE SATURATION INDEX			3.5		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1986

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	3	1	6	Meso.

COMMENTS:

1. This artificial pond is an impoundment of the Merrymeeting River behind Jones Dam. It is referred to as Unnamed Pond No. 3, Marsh Pond, or Jones Dam Pond.

2. The whole-water phytoplankton was 55% greens and 40% cryptomonads. Dominant genera were tiny green flagellates (50%) and Chroomonas (35%).

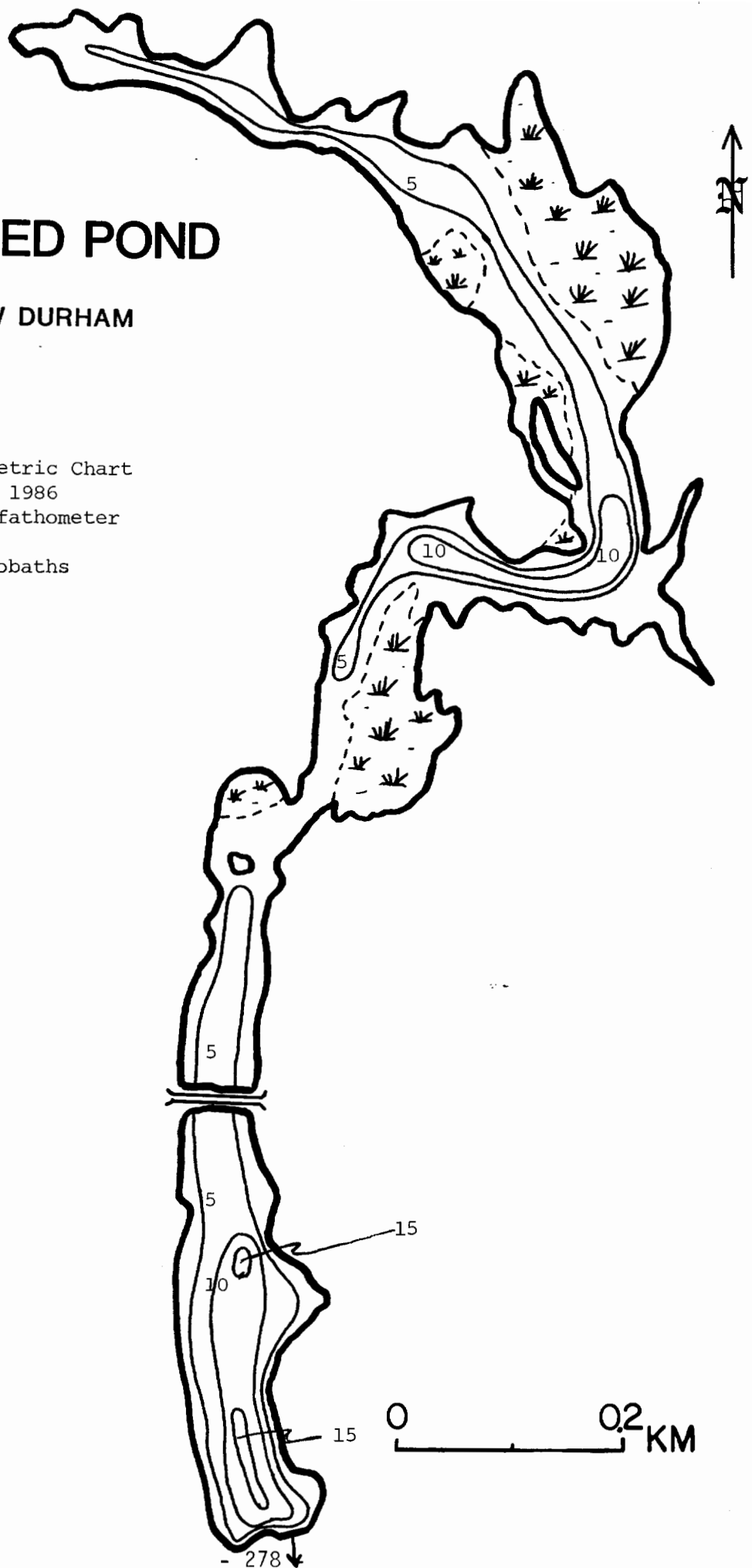
3. Launch site was a dirt ramp just upstream from the bridge. No parking area was provided.

# UNNAMED POND

NEW DURHAM

Rough Bathymetric Chart  
WSPCD - 1986  
sounded by fathometer

5 foot isobaths



## FIELD DATA SHEET

LAKE: UNNAMED POND  
DATE: 07/03/86

TOWN: NEW DURHAM  
WEATHER: OVERCAST

[illegible]

SECCHI DISK (m): 3.4

COMMENTS:

BOTTOM DEPTH (m): 5.0

TIME: 1240

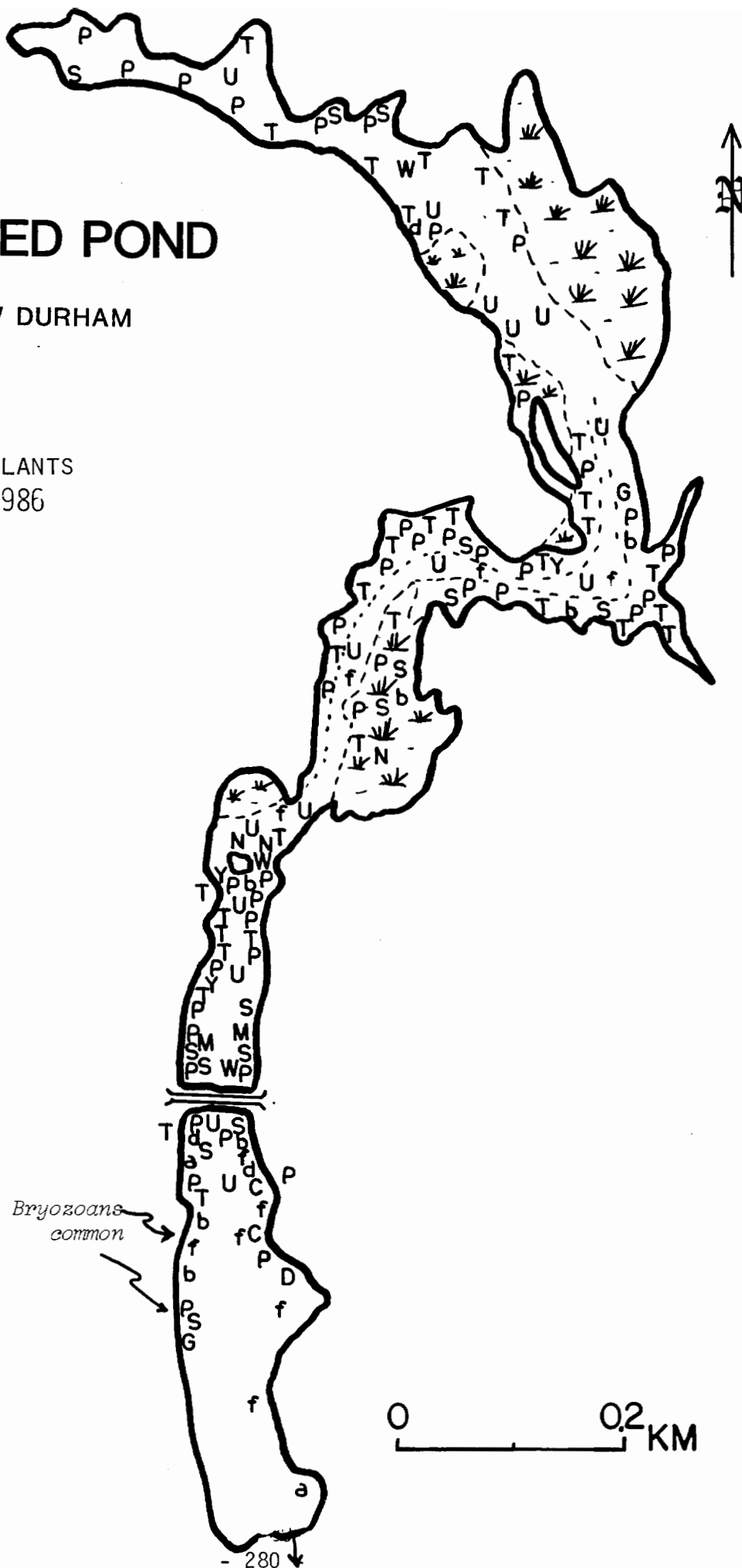
\*Dissolved oxygen values are in mg/L

# UNNAMED POND

NEW DURHAM

AQUATIC PLANTS

3 JUL. 1986



AQUATIC PLANT SURVEY			
LAKE: UNNAMED POND		TOWN: NEW DURHAM	DATE: 07/03/86
Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
C	Ceratophyllum demersum	Coontail	Common
U	Utricularia	Bladderwort	Abundant
W	Potamogeton	Pondweed	Scattered
P	Pontederia cordata	Pickereelweed	Abundant
T	Typha	Cattail	Common
S	Sparganium	Bur reed	Abundant
Y	Nuphar	Yellow water lily	Scattered
d	Spirodella polyrhiza	Big duckweed	Common
a	Peltandra virginica	Arrow arum	Scattered
D	Dulichium arundinaceum	Three-way sedge	Scattered
b	Scirpus	Bulrush	Scattered
G	Gramineae	Grass family	Scattered
f	Fontinalis	Water moss	Common
M	Myriophyllum humile	Water milfoil	Common
N	Nymphaea	White water lily	Scattered
OVERALL ABUNDANCE: Abundant			
<u>GENERAL OBSERVATIONS:</u>  1. Bryozoans and mussels were observed.			